

MARYLAND NUTRIENT MANAGEMENT PROGRAM

2010 Annual Report





In 2010, the Maryland Nutrient Management Program focused on providing enforcement and compliance assurance. Part of the compliance efforts included developing new technologies to enhance nutrient management and improving data management in order to provide a more accurate picture of agriculture's role in protecting water quality in the Chesapeake Bay and its tributaries. Other priorities included improving the tools farmers use to reduce the potential for nutrient impacts. Farmers have a long, successful history of conservation and these management and reporting tools will further illustrate their environmental stewardship.

Throughout the year, MDA worked to bring all farmers and non-agricultural land managers into compliance with program requirements. As a result of these efforts, 99.9 percent of farmers have nutrient management plans, 97.2 percent have filed their Annual Implementation Reports (AIRs), and non-agricultural land managers are doing a better job managing turf. MDA's efforts included both education and enforcement, with an increasingly strong enforcement focus. Proof of compliance through audits, recordkeeping and data management is a top priority as we work together to meet our Chesapeake Bay restoration goals.

Bay models are only as good as the data used to create them. MDA is working to eliminate the need to manually enter farm information into its database. In February, electronic reporting was introduced which allows MDA to import information from AIRs directly into its database. The reporting form is currently being revised in order to make it more user friendly and popular with farmers, who were slow to embrace the electronic reporting format.

In other areas, new technology is needed if we are to be successful in protecting the Bay from excess nutrients. Earlier this year, the U.S. Environmental Protection Agency required the six Bay states and the District of Columbia to develop Watershed Implementation Plans (WIPs) that lay the groundwork for placing the Bay on a pollution diet. Many of the best management practices required by Maryland's WIP focus on improving agricultural nutrient management through the use of new technologies such as precision agriculture and manure incorporation in no-till systems. MDA sponsors research in these areas and I am excited to report that the University of Maryland is developing a piece of equipment that will allow poultry manure to be incorporated into no-till systems.

In addition, the University of Maryland completed a data analysis and is making revisions to the Phosphorus Site Index, an important tool used by farmers and nutrient management consultants to reduce the risk of phosphorus loss from farm fields. The revised index is expected to further limit the use of manure as a crop fertilizer, making the need to develop alternative uses for manure all the more pressing.

The following report more fully characterizes how farmers and urban land managers are managing nutrients in Maryland.

Sincerely,

Earl F. Hance, *Secretary of Agriculture*



Legal Update A number of law suits were filed against MDA this year concerning the confidentiality of nutrient management plans as required by law. In addressing these law suits, MDA has followed the counsel of the Maryland Attorney General's Office, which has advised the department not to release any information that would identify the contents of a particular nutrient management plan as being associated with a particular farmer. Under the guidance of the Attorney General's Office, MDA is developing a policy that will allow it to present compliance information in a manner that can respond to the public's interest in nutrient management while protecting the confidentiality of plan information.

AGRICULTURAL COMPLIANCE ASSURANCE AND ENFORCEMENT

Nutrient Management Plan Submissions

Maryland farmers are required to submit their initial nutrient management plans to MDA for review. As of June 30, 2010, 5,722 farmers had filed their initial nutrient management plans with MDA. The figure represents 99.9 percent of regulated farm operators and 99.9 percent of regulated acreage (1,324,302 acres). MDA enforcement specialists worked throughout the year to bring the compliance rate to 100 percent by tracking down missing plans and collecting \$2,800 in fines and penalties. MDA is currently pursuing enforcement actions against five remaining farmers who have failed to submit initial nutrient management plans for 702 acres of farmland.

Annual Implementation Reports (AIRs)

Farmers are required to update their nutrient management plans at least every third year and submit AIRs to MDA describing their use of nutrients for the previous calendar year. The AIRs allow MDA to verify farm information, identify changes in property farmed and document fertilizer and nutrient use. These reports are due to MDA by March 1 of each year.

In April 2010, MDA issued 1,367 warning notices to farmers who failed to file their AIRs by the March 1 deadline, followed by 473 notices of

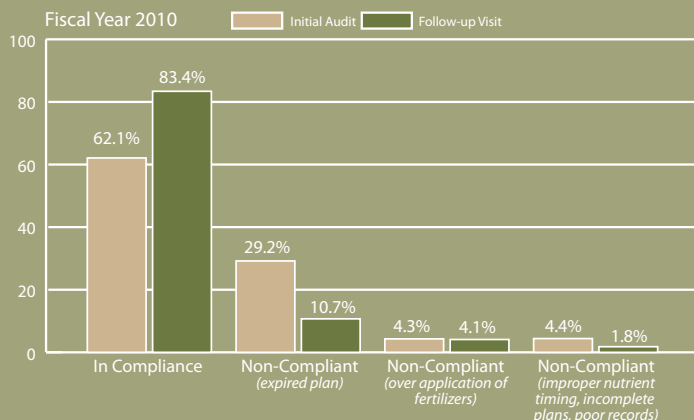
pending fines. By June 30, 2010, 97.2 percent of regulated farmers had submitted their AIRs to MDA. In Fiscal Year 2010, MDA collected \$9,000 in fines against 36 farmers who failed to submit their AIRs.

On-Farm Audits And Inspections

Obtaining a nutrient management plan and reporting annual nutrient management progress are important first steps in protecting waterways from nutrient pollution. Maintaining full compliance with Maryland's nutrient management regulations, however, requires farmers to update their plans based on new soil test data and manure analyses, keep accurate records, and implement their plans in accordance with MDA regulations.

MDA's six nutrient management specialists conduct on-farm audits and inspections to verify that nutrient management plans are current, records are in line with plans, and that the farmer is using the plan to properly manage nutrients. In Fiscal Year 2010, MDA conducted 412 implementation audits covering 168,117 acres. Specialists issued 167 warnings to correct major violations and documented minor violations to be corrected. The majority of the violations were due to expired nutrient management plans. By the end of the fiscal year, 99 of the 167 major violations had been corrected. MDA continues to work to bring all farmers into compliance. In Fiscal Year 2010, MDA collected \$1,150 in fines against four farmers who failed to take corrective actions. The remaining 64 farmers are in various stages of the enforcement process.

Results of Initial On-Farm Audits and Follow-Up Inspections



How An Implementation Audit Works

MDA's six nutrient management specialists audit approximately eight to 10 percent of regulated farms each year to verify that farmers are following their nutrient management plans. The audit includes a visual inspection of the farm along with a comprehensive review of farm records and fertilizer receipts. Audits target farmers who filed late AIRs, operations with previous violations or a history of complaints, high risk animal operations, farms using organic materials or sludge, and farms located in priority watersheds.

During an audit, the nutrient management specialist will ask to see the following information:

- The farm's most recent nutrient management plan
- Soil test results, aerial map, manure analysis, nutrient recommendations, P-Site Index calculations and best management practices
- Nutrient sources, analysis and content
- Nutrient rates and quantity
- Nutrient application timing and method
- Receipts for purchased nutrients
- Yield information
- MDA applicator voucher or certificate number

Farmers receive a copy of the compliance report following the audit. If minor infractions are identified, farmers are given a prescribed amount of time to fix the problem. If major violations are noted, the farmer receives a written warning and a time frame for corrective actions. Major violations include:

- Outdated nutrient management plan
- Missing yield records
- Inappropriate timing or over application of nutrients
- Mismanagement of organic wastes

Farmers who do not correct violations within the required time period are subject to enforcement procedures which may result in fines and penalties of up to \$2,000 per year, loss of state cost-share grants, and civil and criminal proceedings.



Urban and Other Non-Agricultural Nutrient Management Programs

MDA regulates individuals and companies that apply fertilizer to 10 or more acres of non-agricultural land. Land managers who care for these properties are required to take soil tests, follow University of Maryland Extension fertilizer and timing recommendations, and keep records of fertilizer applications.

Approximately 700 operations are regulated by MDA's Urban Nutrient Management Program and roughly 10 percent of these operations are selected randomly for inspection. In Fiscal Year 2010, MDA reviewed the maintenance records of 24 golf courses, 32 lawn and landscape companies and three public lands maintenance facilities. The reviews resulted in 19 warnings against five golf courses and 14 lawn and landscape companies. The most common compliance issues were lack of soil tests and over-application of nutrients. Operations that failed their first inspection were given a deadline to make corrections and received a follow up inspection. As of June 30, 2010, 12 follow up inspections were conducted with satisfactory ratings.

Nutrient Management Plan Reviews

MDA nutrient management specialists review nutrient management plans prepared by certified consultants and farmers to ensure that they meet regulatory standards and are effective in protecting water quality. A site visit is conducted as part of this review process.

In Fiscal Year 2010, MDA specialists reviewed 256 nutrient management plans developed by certified consultants and farmers. All plans reviewed complied with regulatory requirements. Eighty-one commercial nutrient applicators were also inspected and found to be in compliance.

In order to participate in MDA cost-share programs, farmers must be in good standing with the Nutrient Management Program. In Fiscal Year 2010, MDA specialists reviewed 113 nutrient management plans for farmers seeking reimbursement through the Maryland Agricultural Water Quality Cost-Share (MACS) Program. All of these plans met regulatory requirements.

An additional 22 nutrient management plans were reviewed as part of the Maryland Department of the Environment's (MDE) cross compliance for issuing sewage sludge utilization (SSU) permits. The majority of plans written for SSU permits failed to meet MDA's standards. Major inadequacies included missing recommendations for phosphorus and potassium and improper use of the Phosphorus Site Index tool. MDA and MDE are working with sludge management companies to fix the problems.



Data Management

According to the 2007 USDA Census of Agriculture, 42 percent of Maryland's farmland is rented or leased, resulting in a significant amount of agricultural land that may change hands from year to year. MDA uses a manual data entry system to update its database with information on rental operations and other types of properties that cannot be tracked using the Maryland Department of Assessments and Taxation's database.

In Fiscal Year 2010, MDA explored options for automating this process in order to ensure the integrity of the data and eliminate the need for manual data entry. As an important first step, it introduced an electronic PDF version of the AIR reporting form with fillable fields that allows MDA to process the data directly into its nutrient management database, resulting in fewer errors and a clearer, more accurate picture of farmer compliance.

Certification and Licensing Programs

Consultant Certification

In Fiscal Year 2010, MDA certified 52 new consultants who passed the Nutrient Management Certification Exam, bringing to 1,148 the number of individuals who have successfully completed the program. The figure includes 380 consultants who are licensed by MDA and about 130 who are actively writing plans. MDA also funded 21 University of Maryland consultants in Fiscal Year 2010, down from 28 positions funded in Fiscal Year 2009 due to state budget reductions.

Farmer Training and Certification

Farmers can become certified by MDA to write nutrient management plans for their own operations. As part of the process farmers undergo approximately 11 hours of classroom instruction and practice in writing plans for livestock, poultry, crop or nursery and greenhouse operations. Farmers who pass their exams use the NuMan Pro software program to develop their own nutrient management plans with guidance from MDA and UME staff.

In Fiscal Year 2010, MDA certified 23 farmers to write their own nutrient management plans. To date, 325 farmer/operators have been certified to develop nutrient management plans for properties that they own or manage.



EDUCATION PROGRAMS

Nutrient Applicator Voucher Training

Individuals who apply nutrients to 10 or more acres of cropland are required to attend an applicator training course once every three years. In 2010, MDA and UME conducted 31 voucher training sessions attended by 634 individuals seeking to obtain or renew their vouchers. To date, 5,828 vouchers have been issued.



Nutrient Applicator Training for Non-Agricultural Applicators

MDA provides training to lawn care workers who apply nutrients to private lawns, golf courses, recreation fields and other public lands. During the year, 34 participants attended two training sessions offered in English and Spanish.

Continuing Education

Nutrient management consultants are required to complete six hours of continuing education following their first year of certification and 12 hours of continuing education every three years thereafter. In Fiscal Year 2010, MDA and UME sponsored 37 education classes on nutrient management topics attended by more than 500 individuals. MDA approved 50 additional courses and field events sponsored by other recognized organizations and attended by 874 individuals.

Nutrient Management Exam Training

MDA offers a training course for individuals planning to take the Nutrient Management Certification Exam. In Fiscal Year 2010, 51 individuals completed the two-day training course.

Nutrient Management Training for Soil Conservation District Personnel

In Fiscal Year 2010, MDA offered a special one-day training course to prepare soil conservation district personnel to assist animal operations with management plans required by MDE's Confined Animal Feeding Operation (CAFO) Permit. Fifty-four individuals attended the training.

MARYLAND'S NUTRIENT MANAGEMENT PROGRAM

The Water Quality Improvement Act (WQIA) of 1998 requires all farmers grossing \$2,500 a year or more or livestock producers with 8,000 pounds or more of live animal weight to follow nutrient management plans when fertilizing crops and managing animal waste. These science-based documents specify how much fertilizer, manure or other nutrient sources may be safely applied to individual crop fields. By matching fertilizer use with crop nutritional needs, the plans help prevent excess nutrients from contaminating waterways. Nutrient management plans are required for all agricultural land used to produce plants, food, feed, fiber, animals or other agricultural products.

Because of their complexity, nutrient management plans must be prepared by a certified University of Maryland Extension (UME) specialist, certified private consultant for hire, or farmer who is trained and certified by MDA to prepare his or her own plan.

Farmers are required to update their nutrient management plans at least once every three years or when changes are made to their operations. Annual Implementation Reports (AIRs) describing how farmers utilized nutrients during the previous calendar year are due to MDA by March 1.

Farmers who apply nutrients to 10 or more acres of agricultural land are required to obtain an applicator voucher and attend a two-hour MDA-sponsored continuing education program on nutrient application once every three years. Consultants and farmers certified to prepare nutrient management plans are required to take continuing education courses in order to keep abreast of the latest nutrient management technologies and regulations.

Non-agricultural nutrient applicators, including commercial lawn care companies, landscapers, golf course managers and public groundskeepers, are required by law to follow UME guidelines when applying nutrients to lawns, athletic fields or other landscapes. Both agricultural and non-agricultural nutrient applicators are required to maintain accurate records of soil test results and nutrient applications and make these records available to MDA if they are selected for audit.



Maryland Department of Agriculture Nutrient Management Offices

REGION 1: Allegany, Garrett and Washington counties

Maryland Department of Agriculture
Nutrient Management Program
3 Pershing Street, Room 100
Cumberland, MD 21502
301-722-9193

REGION 2: Carroll, Frederick, Howard and Montgomery counties

Maryland Department of Agriculture
Nutrient Management Program
92 Thomas Johnson Drive, Suite 110
Frederick, MD 21702
301-694-9290, ext. 136 or 137

REGION 3: Anne Arundel, Calvert, Charles, Prince George's and St. Mary's counties

Maryland Department of Agriculture
Nutrient Management Program
50 Harry S. Truman Parkway
Annapolis, MD 21401
410-841-5934 or 410-841-5949

REGION 4: Baltimore, Cecil, Harford and Kent counties

Maryland Department of Agriculture
Nutrient Management Program
19 Newport Drive, Suite 106
Forest Hill, MD 21050
410-838-6181, ext. 118

REGION 5: Caroline, Dorchester, Queen Anne's and Talbot counties

Maryland Department of Agriculture
Nutrient Management Program
28577 Mary's Court, Suite 4
Easton, MD 21601
410-822-8120 or 410-822-8126

REGION 6: Somerset, Wicomico and Worcester counties

Maryland Department of Agriculture
Nutrient Management Program
27722 Nanticoke Road, Unit 2
Salisbury, MD 21801
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Maryland Department of Agriculture

Office of Resource Conservation

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